

## IN THE CLAIMS

Please amend the claims as follows.

1. (Canceled)

2. (Canceled)

3. (Currently Amended) A core, which employs unit blocks made of soft magnetic metal powders and which has excellent high-current DC bias characteristics, comprising:

the unit blocks for the core, which are produced using one or more powders selected from the group consisting of ~~sendust powder~~, High Flux powder, MPP powder, and silicon steel powder, produced by a spray process, and which each have a length of 3 - 10 cm, a width of 1 - 5 cm, and a height of 1 - 5 cm, wherein the powders are ~~compacted by insulation coating~~ insulated and coated and then compacted ~~and/or~~ at a pressure of 10 tons/cm<sup>2</sup>-18 tons/cm<sup>2</sup> and heat treated at 600<sup>0</sup>C-800<sup>0</sup>C for 1-2 hours in an inert gas,

wherein the unit blocks are attached to each other using a heat and fire resistant epoxy or polyurethane adhesive to form a single-phase reactor or a three- phase reactor.

4. (Withdrawn) A method of producing a core, which employs unit blocks made of soft magnetic metal powders and which has excellent high current DC bias characteristics, comprising:

mixing one or more, each having an average particle size of 175  $\mu\text{m}$  or less, selected from the group consisting of sendust powder, High Flux powder, MPP powder, and silicon steel powder, with a solid lubricant;

compacting a powder mixture at a pressure of 10 - 18 tons per unit area so that each of the unit blocks is 3 - 10 cm long, 1 - 5 cm wide, and 1 - 5 cm high;

heat-treating the compacted mixture at 600 - 800°C for 1 - 2 hours in an inert gas atmosphere to form the unit blocks each having a length of 3 - 10 cm, a width of 1 - 5 cm, and a height of 1 - 5 cm; and

attaching the unit blocks to each other using a heat and fire resistant epoxy or polyurethane adhesive to form the core.

5. (New) The core of claim 3, wherein each of the unit blocks has a hexahedral shape.

6. (New) The core of claim 3, wherein each of the unit blocks has a residual stress removed.

7. (New) The core of claim 3, further comprising  
a bracket on the unit blocks to endure vibration and impact.